



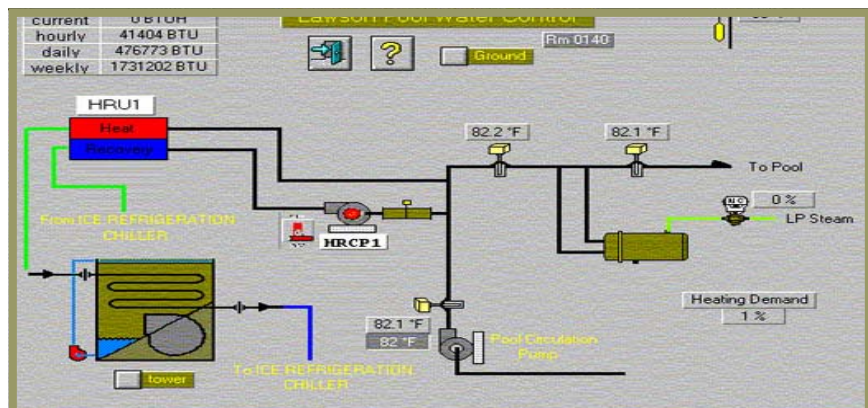
Western Michigan University

Heat Recovery System

Western Michigan University has recently [2000] completed the installation of a Heat Recovery Project at Lawson Ice Arena and Gabel Natatorium on the main campus. The basic scope of this project was to recover the rejected heat from the Lawson Arena Ice Machine, then transfer that heat to the swimming pool in Gabel Natatorium. The two buildings are attached and share a common mechanical room. The device used to transfer the heat is a plate and frame unit. The Heat Recovery Unit [HRU] was inserted into the refrigerant line just prior to the cooling tower. The water lines were tapped into the main pool water circulating line in the mechanical room in the basement and piped to the location of the HRU. Prior to this project the pool was heated with Plant Steam. Initial calculations forecast a less than two year payback. Also installed was a Variable Frequency Drive on the tower fan in addition to the HRU. Besides saving energy, the entire system is operating in a much smoother manner.



Following is a photograph of the HRU, and a printout of how the system is set up, taken from our Energy Management Computer System by Invensys. The heat recovery system is controlled by the EMCS.



Feel free to contact us if you have any ideas for case studies or other questions :

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